

CLAIMS

What is claimed is:

1 1. A method for committing a transaction, the method comprising the
2 steps of:

3 assigning a resource manager a globally unique identifier (GUID), the
4 resource manager assigned to complete the transaction;

5 detecting a failure such that the resource manager cannot complete the
6 transaction; and

7 assigning a backup resource manager the GUID when the failure is detected
8 such that the transaction is completed by the backup resource manager.

1 2. The method of claim 1, further comprising the steps of:

2 associating a beginner transaction manager facility (TMF) with the resource
3 manager;

4 broadcasting a prepare signal to a plurality of other TMFs that each receive the
5 prepare signal;

6 communicating a ready signal from each of the other TMFs back to the
7 beginner TMF; and

8 broadcasting a commit signal,

9 wherein the resource manager is replaced by the backup resource manager
10 when the detected failure occurs after the ready signals are communicated and before
11 the commit signal is broadcasted.

1 3. The method of claim 2, wherein the step of broadcasting the commit
2 signal further comprises the step of broadcasting the commit signal by the backup
3 resource manager.

1 4. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of the resource manager.

1 5. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of a component associated with the resource
3 manager.

1 6. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of another node associated with the resource
3 manager.

1 7. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of communication from the resource manager.

1 8. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of a processor unit associated with the resource
3 manager.

1 9. The method of claim 1, wherein the step of detecting the failure further
2 comprises the step of detecting loss of a process associated with the resource
3 manager.

1 10. A transaction processing system which commits a transaction
2 comprising:

3 a resource manager having an assigned globally unique identifier (GUID) and
4 assigned to complete the transaction; and

5 a backup resource manager that is assigned the GUID when the resource
6 manager is lost such that the transaction is completed by the backup resource
7 manager.

1 11. The transaction processing system of claim 10, wherein the transaction
2 is performed using a two-phase transaction protocol.

1 12. The transaction processing system of claim 10, further comprising;
2 a beginner transaction manager facility (TMF), associated with the resource
3 manager, that causes a prepare signal to be broadcasted; and
4 a plurality of other TMFs that each receive the prepare signal and each
5 communicate a ready signal back to the beginner TMF, wherein the resource manager
6 is replaced by the backup resource manager when the resource manager is lost after
7 the communicated ready signals and before a commit signal is received.

1 13. A system for committing a two-phase protocol transaction, comprising:
2 means for assigning a resource manager a globally unique identifier (GUID),
3 the resource manager assigned to complete the two-phase protocol transaction;
4 means for detecting a failure such that the resource manager cannot complete
5 the two-phase protocol transaction; and
6 means for assigning a backup resource manager the GUID when the failure is
7 detected such that the two-phase protocol transaction is completed by the backup
8 resource manager.

1 14. A transaction processing system which commits a two-phase protocol
2 transaction comprising:
3 means for specifying a beginner resource manager having an assigned globally
4 unique identifier (GUID) and assigned to complete the two-phase protocol
5 transaction; and
6 means for specifying a backup resource manager that is assigned the GUID
7 when the beginner resource manager is lost such that the two-phase protocol
8 transaction is completed by the backup resource manager.